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SEQUENCE LISTING

<110> Barbosa, et al

<120> Markers for Evaluating Estrogenic Activity

<130> 10624-051

<140> 09/853,544

<141> 2001-05-10

<160> 19

<170> PatentIn version 3.0

<210> 1

<211> 555

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(555)

<223> n = a, c, g or t

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ggaaatgtgt ataattacag aagaaaacag ggaggactta gtgcagagag gagacgagtg 180
tggacggggca acagcatcct tagtctttca tatttatata tggatatatg attttctata 240

tatatattta tatattttac atccaggtat cccagtcac tgtaccattt cccagggaga	300
catgggtgct tccaaggcga gacaggaaag ggtaggcag ggaaggggca gcgacggtgc	360
aggctggggc ttggctcaca gaagctgcag gagcttcagc agctgtaaga gggccccggg	420
ctccgcagac gccaggtact gagnaagaag cagtcctcca gctccacgcc ccgctgcga	480
tccaccgct tctccgaaa cttcatcatc atcagggccc gcttcatgtc gatccagttg	540
tgcagcgtgc gcaca	555

<210> 2

<211> 923

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(923)

<223> n = a, c, g or t

<400> 2

tnnntttntg tggtngtgcg gtgggggngg tagggacagt gtacagagtt ccagctcttc	60
tttgattcac ccccttcct cctcctcct tctttcccat tgctacacta aaggagtcag	120
ggctgtgtcc accaatatgc tctgtgacta gcagtcacaa caatttcata cccagccagt	180
cattccggag natttgggat gataatgttc ccattctcag ttctctgtg agaatgtgna	240
tgtcatttga agctctgtgc ctgagtttc atagaagtaa aacaaaaagc aagaattgag	300
actgatcttt tncctgnaag aattcacang taatggataa tgtacaagag atgtggctga	360
ataagagaac tagaacaang acttgaacaa tttncctatg caacactctt tcccatggac	420
aaaggatatcc cacaaagtca tncctcatcg gaggctagtt tgtccaaaga aaactcacat	480
accaatgcaa tagtgacaaa aaaaaattcc tccatgccaa ttcaggaaac agaacgcaag	540
ttgtgcttaa gnccatggtn ggggtgtggga agatgttcca anaccgncac cccttacct	600
cntctatgac tatctncaac ccccnagnann ggggctcgnc agtttgntaa aggggttaat	660
taccannagg gggcntgtcc cccagnggt cncctggggn gtgananncn anaaaaccnc	720

tntccattta ccaaacaaan acacntccct gggattattn ggggggttnca ggcttttnag	780
ncannttcca ngcctngnt ctgnccctnn tccnnggttg ggaanccatc ccccngctc	840
ctgattacca atnccnaat cccnnggtgg ggttgnattc atctctcca aaatgttngt	900
tggnttcggg gggtnaagan ttt	923

<210> 3

<211> 629

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(629)

<223> n = a, c, g or t

<400> 3	
cacaggggtca cagattcacc aaagctgaaa gggctgagga gctcatggta gcctggggtg	60
acctactctg gagcacggtg tcttccttct aaactgagtg actgtagtac tatctgtgcc	120
tctgatggta ataaaaactga caagatgtct aatttttttt taagtaggac caaaggaaaa	180
caagatttag atagtctgac tttgcttttg aacaacagac attgcaagtc aaaattgttg	240
tcaaatttac atatggtaaa tgatgaactt taaaaatgtg tccaggtgtt agatgagttc	300
attagactct tttaatgcta atggctagta ccgtttaaac aaaacagcag ttctctgctg	360
caatattccc attgaccact taaatgacca taagtgggtca tttaagaaca tgtaggggtt	420
agccctgatc tgaatataaa agtgagaaaa gggctacagt gcatttcttg gtaacttaaa	480
ctgagtcctg aagttataat gatccattcg agttcngtga tccttattgg tcctaattgg	540
ggttcccnac cgtattggta cagatgagcc atacgttccc ttggtaccat gtagacatga	600
cttcagatac ccctgaggac ctncagca	629

<210> 4

<211> 448

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(448)

<223> n = a, c, g or t

<400> 4
tcgacgctna gagtggacag ggagcggggc ttttgtctgt tggctctcct ggactgaaga 60
gagggagaat agaagcccaa gactaagatt ctcaaatgg tttattacc agaactcttt 120
gtctgggtca gtcaagaacc gtttccaaac aaggacatgg agggaaggct tcctaaggga 180
agacttcctg tcccaaagga agtgagccgc aagaagaacg atnagacaaa cgctgcctcc 240
ctgactccac tgggcagcag tgaactccgc tccccaagaa tcagttacct ccactttttt 300
taatcgtaac acctccattt gtattacata tgggtgatgg gtattgatga ggtcatggta 360
tcatatatgg gatttttttc tgtgtaaata atcaagtata agaagaaact atgggactct 420
gagccttgct ttagagaant tacagtgg 448

<210> 5

<211> 460

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(460)

<223> n = a, c, g or t

<400> 5
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acgctgtcgg cattgccagc ctggsawttt ccgatgccgg gacragaagt gcgtgtatga 120
gacrtgggtg tgcgawgggc acccaaactg tgcggacggc artgatsagt gggactgctc 180

ctatgttctg ccccgcaagg tcattacagc tgcagtcatt ggcagcctas tgtgcggmct	240
gctcctgktc atcgccctgg gctgcacctg cwwgctctat gccattcgca cccaggagta	300
cagcatcttt gccccctct cccggatgga ggctgagatt gtgcatcaac aggacacccc	360
ttcctacggg cagctcattg cccaagggtgc catcccacct gtagaatact ttcctacaga	420
gaatcctaata gataactcag tgctggggcaa cctgcgttct	460

<210> 6

<211> 446

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(446)

<223> n = a, c, g or t

<400> 6	
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cttctgcaca aattcaacat ggtaaccctc acagcattct agggcataaa aggggtcaagt	120
acaataaata tccacygtaa gtgggtcataa ggaagaaaat caccctgcca cacagtcaga	180
atgttttccc ttcagctckc cctaccgttg agaagcgcta taaaaggagg ctttakcstc	240
ctctaaagtt taccattata ttcactaaaa gccaccacct tgataaagtt actaaagcca	300
agatgggtta caaagttaga taagttcatt aaattcaact ccccaaacaa ttacgtttat	360
ctatgatgcc taggcgagaa aggcctgtga atctataasg taggagaatg gggaactaag	420
attttaggcc ttaaaatatg ttggaa	446

<210> 7

<211> 295

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(295)

<223> n = a, c, g or t

<400> 7

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cgcgcactag gctgccagaa gatcctccaa ggagccatcc cagacccagt gatctgctgc      60
cactcacatt gtggcagtga cacttccaaa gcagctattg tattctggag cctcctggat      120
gaacatcagc tttatcacct ggagcctggt acaaacgtag aatcttgacc tcagcccagc      180
cctactgaat cagagtctac atttttaatg agatccccc an gtgattcgca agcacatgag      240
agtttgagaa gtgctgtctg gttacttatg gcagccta at gacggtaatc gaatt          295
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<210> 8

<211> 507

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(507)

<223> n = a, c, g or t

<400> 8

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tgctgcacna gtcaatcaca ntttgcaact gcaaaagagg cataaactga cggggatctc      60
ctgctttact atgcacacac agcttaactc tccaaccgtg gagaacaact aactctatan      120
gaaaaatnaa aagntaaact naaccatcca aggatggggg naagggttc atgggtaact      180
tctggcctgt nagcactaaa ttncaaactg ctctgcaag aaacctnaag ggctgggaag      240
gctttatctg gctcaaaaac taaggntgct ctcnaaagaa ttcaaattct cctcaacaan      300
cnanaaan tkgtcaatcc aattcaaggc tccntnana ttgnaagnan ttcctntnaa      360
caacaacaag gtgactkact ytkcaacaa tytaaattcc cccggcsncc atggggggcn      420
ggaaanatss aantntnggc ccaatttccc canaatkagt cttataaaaa tcacwgggcg      480
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tcttttaaang tctkactggg naaaaac

507

<210> 9

<211> 256

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(256)

<223> n = a, c, g or t

<400> 9

ccatttcgtcc gtaggtccag gtgtttttacg tcagcagggg aatgtggcac acgccctcga	60
ggcatttttaa cactgcgctt caggaaatct caagttccat cttgtgttag taacgtaccc	120
acatttttgct ggagttagtt tattaaagat gcctacgggtg aactctctgg cgcagggttaa	180
atgcagttttt gaaaacctgg aaacatcaaa tggaggcggg aaataagctg gggccgagct	240
gaggggctga acacga	256

<210> 10

<211> 336

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(336)

<223> n = a, c, g or t

<400> 10

ttgtgcttaa aaaaataggc ttctcagtg aagcacctga taaamttagg tggttggatt	60
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acagtggaaa gtccacttta cacacacaca caaacacaca aaaactggcg actttttcca	120
tccccaatcc ctgcamtgst gagacacaaa atgagttttw tggcaaagga tccttaatcc	180
ccagagacgc tttggcttgt ggtgcttttt tttttaaggc ctctctgctc tgcccggtag	240
catgggtcga acgaggggtg tataaaatgg gggccttggg aagcctccac ggtacagggc	300
tgcaggcccc tcagatgtga acacgacgac ctggga	336

<210> 11

<211> 442

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(442)

<223> n = a, c, g or t

<400> 11

tgtcagggat accgagagcc ggtgttctgt taacctctgg gaatggctct cccaatccta	60
ggccagttgg cctgggcca ggaccaaacc ccaatctgag atcaggcttt ttagggacaa	120
acctgcccc caggtcaggt gtgtttccag gcccaggcct tgggccaac ccaagaccaa	180
gtggcctggg cccaggccct aatctanatr ccagagcagg tggcctcttg ggcacaggat	240
ctggtcttaa cttaagaatg gctggacctc aaggcctoga tcttgcccc attctaagag	300
cagcaggctt ttaggagca aattcagctt ctttctcaca ggcttctgga aacatgggca	360
caagcccatc ctccatggca agagtacctg gcccctggg cccaaactcg ggtcctanct	420
ctcggtatcc ctgacaatcg aa	442

<210> 12

<211> 310

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(310)

<223> n = a, c, g or t

<400> 12

tcggatccac agagacctgc atgggaggtg gggccaacagg tctggtatca ggcaaaccta	60
ggttggaaca ctggctccat aaagaggaag tcacttaacc ttctctgggg catggtttct	120
tcattctgttc ccacctctga agactatcgt aagacagaat gaaagttaag caacttaacg	180
caacgcccag gataccagaa ttattctaaa tggcagaatc ctacttagtc tgtcatcttg	240
ggagttctct aggcaggcag gttgccaggg gtggggctga gatccagatg tgctctcggt	300
atccctgaca	310

<210> 13

<211> 536

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(536)

<223> n = a, c, g or t

<400> 13

tgacactagt cacgtggcag ggggttttat attgataatt gttgtgatga aattgatggc	60
ccctaagata nagganacac ctgctaggtg taaggagaan atggttaggt ctacggaggc	120
tccaggggtg gagtanttcc ctgctaaggg agggtaaact gttcaacctg ttctgctcc	180
ggcctcmact ataccaawtg cnaccaggat taggaaaaag gggggtaana tcaaacctt	240
atntntntta tgcggggaaa cnccatatcg ggggcaccka ttattagggg aactattcat	300
ttccaaancc nccgattatg atgggtatta ctatgaanaa nattttacaa atgcatgggc	360
tgtgacaana acnttrtaaa tttgsnctta ccnaaaangt tncctgggyt ggcccanctc	420

ggctcnaaaa angagkctaa aactttttcct aagacnccac ctcatgcccc naaaaaaaag 480
tanagtnttc caattttttt gtggnttgka aaaaaaaatc aacggtcggs aaaawy 536

<210> 14

<211> 494

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(494)

<223> n = a, c, g or t

<400> 14

tcgacgctna gaggggacat ttggagcgct ttcaggacga cggtgaaaat ggaaatatct 60
tccaagaaaa tctagataga agcaatgtca gaaactttta tgtgatggat ctactcagct 120
aacagagttg aacctttctt ttgagagagc agttttgcaa cactcttttt gtggaatatg 180
caagtggata ttanggcagc tttgaggatt tcggttgaaa cgggaatata tgtaaaaagc 240
agacagcagc attctcagaa acttctttgt gatgtttgca ttgaagtcac anagttnaac 300
attccctttg agagagcaag tttgaaacac gccttttgtc atatctggaa gtgtccactc 360
tcancgtcga atcgaantcc cgcnggcgcc atggngggcg ggagcatgcn actcngggcc 420
aaatcgccct anantgagtc gtaatanaaa tcaactggccg tcgttttaca acgtctgact 480
ggggaaaaac cccc 494

<210> 15

<211> 507

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(507)

<223> n = a, c, g or t

<400> 15

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cggccgcggg aattcgatta ccgtcactag gctgccaaagt agctgggact acaggcgcat	120
gccagcatgc ctggctaatt tttgtatfff tagtagagcg ggggttttgc catgttggcc	180
aggctgggtct tgaactcctg acctcagggtg atccgcctgc cctggcctcc caaagtgctg	240
ggattacagg catgagccac tgcgccccagc cttgtaatff acctttgatg gtgacctgaa	300
atgcagtatg atcctatatg tggcacgtag taatgttcag tgtttgctga attaatctctg	360
ggcagcctag tgacggtaat cactagttaa ttgcggggcc gcctgcagggt cgaccatatg	420
ggagagctcc caacgccgtt ggatgcatag cttgagtatt ctatagtgtc acctaaatag	480
cttgggccgt aatcatgggtc atagctt	507

<210> 16

<211> 752

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(752)

<223> n = a, c, g or t

<400> 16

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aaatggccac tcaggcggtc ctattcactc ggaaaattag gttcatttca caggacacag	120
cagtgtagat caggcttcaa cttaacatff aagggaatg tcagatffff ttttaattta	180
atgaaattgt taatgaggaa aaatffttta tatatgtotta tctaccacac atccccatag	240
atttaaggat tttaatatgaa agtcatgatg tatgtattca agccacgtta aaagaaaaaa	300
tataactatg gaccgggtatt cagtgaatac agtttcatgg tttttaattc tttcaaaggc	360

acattaaaaa	tggtgtgctg	ataaacccca	agtaaattaa	ccctttttcc	gtataaatcc	420
atTTTTtTgt	ttgaagaggg	gaaattatat	ttattggttg	tttactggaa	tcttgggtgtg	480
gaaagcatat	cagatatgta	tgaactgcta	ctggctgtac	tttccgattt	acgggacatc	540
aattttattg	gcttatttTgt	nanganctg	attaaccatg	gaccattgaa	gtacctattt	600
taatggtnng	gcccttcaan	tggggattgg	gnccagtggc	ccttcaaggt	cttcttgggg	660
gattccgaat	ncacttnagt	ggaatttcnc	nggnccgcct	tgccaaggtc	ganccatntt	720
ngggaaaagc	ttccaaaccg	ccgtttggat	tc			752

<210> 17

<211> 739

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(739)

<223> n = a, c, g or t

<400> 17	
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ttgaattgta	atacgactca
ctatagggcg	aattgggccc
60	
gacntctcat	gctcccgggc
gccatggcgg	ccgcgggaat
tcnattgtta	cagcaaccgc
120	
cagggggcct	tggccaggtc
aagggttctg	tgaggaaagg
acccangatt	gtgggggcat
180	
ttgggggggtg	aattggcccc
chnaaaaatgg	aaccacacac
catagctctc	cccananctn
240	
atacggcatc	ctgcnaaaan
acctgccctc	ctcaactggga
ttcccttcct	gcctcctccc
300	
agggtctctgc	canggccttg
ctcaatccct	tcacacaaag
tcactctnaac	ttccttttcc
360	
ccagggcctc	canctgccct
caaacactga	ttntgtccc
caggtgctct	ctgccccctca
420	
ngccccctctc	ancggcccan
tgccccgact	ctccaggctt
tatcaagggtg	ctaaggcccg
480	
gggtgggcanc	tctcgtctc
aaagccctcc	tccggcctgg
tgctgccttt	acaaacacct
540	
gcaagaaaaan	ggcacggaaa
ccccaaagctt	taaagccctc
aacaagtctg	gtggatccga
600	
ancactaatg	aattcncggc
ccctgcang	tcnacaatat
nggaaanctc	ccaaccggtt
660	

tgatgcaaac ttgantttct atantgtcac ctaaattcctt ggggtaatca tggcaaaact 720
 tttccctntt gggnnataa 739

<210> 18

<211> 261

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(261)

<223> n = a, c, g or t

<400> 18
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 ataacaccaa atgcascmc agtkagcaca ntytctgacn tggggctggg cargatggtc 120
 gcatcttccc tcawgtcar gstcawggtg gttgaattgg ggggaacart ttgaaatgtg 180
 tctggggtac caatgctgga caaatggctt ggctgttaa cctctgagga agggatnttc 240
 ctgggttgga anaaaactggc t 261

<210> 19

<211> 289

<212> DNA

<213> Homo Sapiens

<220>

<221> modified_base

<222> (1)..(289)

<223> n = a, c, g or t

<400> 19

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acgcccagca	tctcagacca	aaatcctttt	ccagctacaa	gacagaaaaa	caaaatctcg	120
gttattgatt	aatttacatc	ccttcttttc	tttcaaacct	gcattaaaac	atctatcaca	180
tgggaagtct	tcctgcatg	gcatgaagtt	cttctgctcc	atctgctact	caggaaacaa	240
tcggactcac	ggtaactcct	gctgaagaac	agggtcagcc	tagtgacgg		289